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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,213	02/24/2006	Henri Joseph Van Egmond	3135-052058	1748

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EXAMINER	
NGUYEN, KHIEM D	

ART UNIT	PAPER NUMBER
2823	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/542,213	VAN EGMOND ET AL.	
	Examiner	Art Unit	
	KHIEM D. NGUYEN	2823	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 February 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Remarks

1. The Amendment filed on February 26th, 2009 is acknowledged. Claims 13-24 are currently pending in this application and claims 13 and 22 are in independent form.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

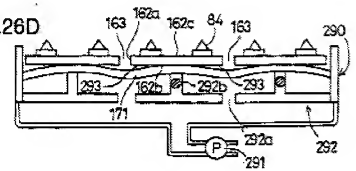
A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 13-15 and 18-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Kira et al. (U.S. Patent 6,885,522).

In re claim 13, **Kira et al.** disclose a carrier for supporting and engaging semiconductor products during separating of the products using laser light (see col. 12, lines 32-49 and FIGS. 11A-F), wherein the carrier comprises a plate **292** provided with a pattern of holes **292a** arranged in a flat carrying side of the plate **292**, and that the plate **292** is manufactured from a material at least substantially not absorbing the laser light (see col. 18, line 47 to col. 19, line 15 and FIGS. 26A-E).

FIG.26D



In re claim 14, as applied to claim 13 above, **Kira et al.** disclose all claimed limitations including the limitation wherein plate **292** is manufactured from glass or ceramic (see col. 17, lines 45-58).

In re claim 15, as applied to claim 13 above, **Kira et al.** disclose all claimed limitations including the limitation wherein the cross-section through the holes **292a** close to the carrying side of the plate **292** is larger than at a distance from the carrying side (see FIGS. 26A-E).

In re claim 18, **Kira et al.** disclose a holder for supporting and engaging semiconductor products during separating of the products using laser light, comprising a carrier **292** as claimed in claim 13, and means **290, 291** for generating underpressure connecting onto the side of the plate **292** remote from the carrying side (see col. 18, lines 47-63 and FIGS. 26A-E).

In re claim 19, as applied to claim 18 above, **Kira et al.** disclose all claimed limitations including the limitation wherein the means **290, 291** for generating underpressure connecting onto the side of the plate **292** remote from the carrying side are formed by a chamber connecting onto the carrier and an

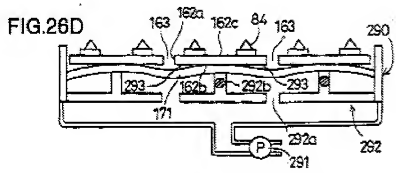
extractor connecting onto the chamber (see col. 18, lines 47-63 and FIGS. 26A-E).

In re claim 20, as applied to claim 18 above, **Kira et al.** disclose all claimed limitations including the limitation wherein the chamber is also provided with positioning means for the carrier (see col. 18, line 47 to col. 19, line 15 and FIGS. 26A-E).

In re claim 21, **Kira et al.** disclose a laser cutting device for supporting and engaging semiconductor products **161** during separating of the products using laser light, provided with a holder as claimed in claim 18, wherein the laser source **180, 181** is located on the carrying side of the plate **292** (see col. 12, lines 32-49 and FIGS. 11A-F).

In re claim 22, **Kira et al.** disclose a method for supporting and engaging semiconductor products during separating of the products using laser light, comprising the processing steps of: A) placing an assembly of semiconductor products **161** for separating onto a flat plate **292** provided with a pattern of holes **292a**, B) applying an underpressure to the holes **292a** of the pattern of holes such that the assembly of semiconductor products **161** is drawn against the plate **292**, C) directing at least one laser beam **180, 181** onto the assembly and cutting through the assembly **161** where this is desired by means of mutual displacement of the laser source **180, 181** and the flat plate **292** such that each severed semiconductor product **162** is still connected to at least one hole **292a** in the flat plate **292**, and D) taking the separated products **162** from the plate **292**

(see col. 12, lines 32-49 and FIGS. 11A-F) and (col. 18, line 47 to col. 19, line 15 and FIGS. 26A-E).



In re claim 23, as applied to claim 22 above, **Kira et al.** disclose all claimed limitations including the limitation wherein the underpressure on the holes **292a** is at least partly relieved before the separated products **161** are removed from the plate **292** (see col. 18, line 47 to col. 19, line 15 and FIGS. 26A-E).

In re claim 24, as applied to claim 22 above, **Kira et al.** disclose all claimed limitations including the limitation wherein the assembly of semiconductor products **161** is drawn against the plate **292** during processing step B) such that possible deviations in the flatness in the contact side of the assembly are removed by the suction of the plate **292** (see col. 18, line 47 to col. 19, line 15 and FIGS. 26A-E).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kira et al. (U.S. Patent 6,885,522).

In re claims 16 and 17, as applied to claim 13 Paragraph 5 above, **Kira et al.** disclose in (FIGS. 26A-E) wherein holes **292a** having a predetermined top angle and wherein the pattern hole holes is grid-shaped but is silent about wherein the holes **292a** have a top angle between 15º and 45º, preferably a top angle of 30º and the pitch between the holes is greater than 200 μm.

However, there is no evidence indicating the top angle range of the holes and the pitch between the holes is critical and it has been held that it is not inventive to discover the optimum or workable range of a result-effective variable within given prior art conditions by routine experimentation. See MPEP *§* 2144.05. Note that the specification contains no disclosure of either the critical nature of the claimed dimensions of any unexpected results arising there from. Where patentability is aid to be based upon particular chosen dimensions or upon another variable recited in a claim, the Applicant must show that the chosen dimensions are critical. In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Response to Applicants' Amendment and Arguments

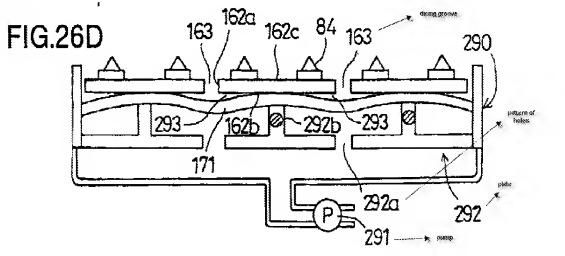
6. Applicants' arguments filed February 26th, 2009 have been fully considered but they are not persuasive.

Applicants' contend that the reference Kira et al. (U.S. Patent 6,885,522), herein known as **Kira** does not teach or suggest a carrier for supporting and engaging semiconductor products during separating of the products using laser lights as required by the claim.

In response to Applicants' contention that **Kira** does not teach or suggest a carrier for supporting and engaging semiconductor products using laser light as required by independent claim 13, Examiner respectfully disagrees.

Applicants' attention is respectfully directed to (col. 12, lines 32-49 and FIGS. 11A-F) and (col. 18, line 47 to col. 19, line 15 and FIGS. 26A-E), where **Kira** discloses a carrier for supporting and engaging semiconductor products during separating of the products using laser light.

Firstly, **Kira**, specifically, shows in (FIG. 26D and related texts) a carrier comprises a plate **292** provided with a pattern of holes **292a** arranged in a flat carrying side (top surface of the plate) (see marked-up version of FIG. 26D as illustrated below).



Secondly, it is respectfully submitted that Applicants' arguments with respect to the recitation [A carrier for supporting and engaging semiconductor products during separating of the products using laser light] has not been given patentable weight because the recitation occurs in the preamble.

It is note that, a preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See In re Hirao, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and Kropa v. Robie, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Furthermore, with respect to "...separating of the products using laser light...", it is respectfully submitted that even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966. When the reference teaches a product that appears to be the same as, or an obvious variant of, the product set forth in a product-by-process claim although produced by a different process. See In re Marosi, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) and In re Thorpe, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP § 2113.

Additionally, **Kira** discloses in (col. 12, lines 32-49 and FIGS. 11A-F), using a laser light **180/181** to irradiate surfaces of the wafer **161** which enhancing the subsequent dicing process to obtain individual semiconductor product (chip) **162**. Therefore, it is respectfully submitted that **Kira**'s laser irradiating process taking part in separating of the semiconductor products.

With respect to Applicants' further contention that **Kira** does not teach or suggest that the plate is manufactured from a material at least substantially not absorbing the laser light, Examiner respectfully disagrees.

Applicants' attention is respectfully directed to (col. 17, lines 45-58, for example), where **Kira** suggested that the plate can be manufactured from glass or ceramic which is the same materials that formed the plate of the Applicants' claimed invention. Therefore, it is respectfully submitted that the plate of **Kira** can perform the same function of "...at least substantially not absorbing the laser light".

Applicants further contend that "the **Kira** patent does not teach or suggest the step of directing at least one laser beam onto the assembly and cutting through the assembly".

In response to Applicants' contention that **Kira** does not teach or suggest directing at least one laser beam onto the assembly and cutting through the assembly, Examiner respectfully disagrees.

Applicants' attention is respectfully directed to ((col. 12, lines 32-49 and FIGS. 11A-F) and (col. 18, line 47 to col. 19, line 15 and FIGS. 26A-E)) where

Kira discloses directing at least one laser beam **180/181** onto the assembly and cutting through the assembly **161**.

It is respectfully submitted that since Applicants' claimed invention does not clearly specify that cutting through the assembly using the laser beam, Examiner notes that the claims are given the broadest reasonable interpretation. Examiner tails to position that "directing at least one laser beam onto the assembly" and "cutting through the assembly" are two different steps. Therefore, the step of irradiating the laser beam onto the assembly does not mean cutting through the assembly using the same irradiated laser beam.

Kira discloses in (FIGS. 11A-F and related texts), using a laser light **180/181** to irradiate surfaces of the wafer **161** which enhancing the subsequent dicing process to obtain individual semiconductor product (chip) **162**. Therefore, it is respectfully submitted that **Kira**'s laser irradiating process taking part in separating of the semiconductor products. Therefore, regardless if **Kira** disclose dicing through the assembly of semiconductor products using a dicing saw or other cutting tools, it is respectfully submitted that **Kira** clearly teaches both processes of "directing at least one laser beam onto the assembly" and "cutting through the assembly" as required by the Applicants' claimed invention.

For this reason, Examiner holds the rejection proper.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Correspondence

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHIEM D. NGUYEN whose telephone number is (571)272-1865. The examiner can normally be reached on Monday-Friday (9:00 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on (571) 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Khiem D. Nguyen/
Primary Examiner, Art Unit 2823